Applicant: Jordan Bourilkov et al. Attorney's Docket No.: 08935-258001 / M-4980

Serial No.: 10/077,191

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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Claims 1-9 are canceled.

(Currently Amended) 10. A hybrid power supply comprises:

a switching type DC/DC boost type converter that receives energy from a primary cell with the primary cell being an alkaline cell, Zn-air cell, fuel cell, solar cell, or another current limited power source, and is arranged to deliver the energy to a rechargeable cell with the rechargeable cell being an Li-Ion or Li-Polymer rechargeable cell;

a circuit disposed to control the switching type DC/DC converter, the circuit comprising:

a resistor voltage divider coupled to the a feedback input of the converter, the resistor voltage divider having a resistance value selected to provide from the DC/DC converter a fixed output voltage that is less than the full charge voltage of the rechargeable cell.

(Currently Amended) 11. The hybrid power supply of claim 10, further comprising: a primary battery current sensor/comparator, included in the feedback control loop of the DC/DC converter, which that controls in part operation of the converter to provide constant current discharge on the primary battery side of the hybrid power supply.

Claims 12 and 13 are canceled.

(Currently Amended) 14. The hybrid power supply of claim 10 wherein the circuit switching type DC/DC boost type converter delivers an output voltage that corresponds to about 90% charge of the rechargeable cell.

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(Previously Presented) 15. A method of operating a hybrid power supply comprises:

delivering energy from a primary cell to a rechargeable cell the rechargeable cell being an Li-Ion or Li-Polymer rechargeable cell with the energy delivered through a switching type DC/DC boost type converter at a fixed voltage that is less than the full charge voltage of the rechargeable cell.

(originally filed) 16. The method of claim 15, further comprising:

controlling a circuit that senses primary battery current, and controls in part operation of the converter to provide a constant current discharge on the primary battery side of the hybrid power supply.

(originally filed) 17. The method of claim 15 wherein the primary cell is an alkaline cell, Zn-air cell, fuel cell or solar cell, or another current limited power source.

Claim 18 is canceled.

(Previously Presented) 19. The method of claim 15 wherein the circuit delivers an output voltage that corresponds to about 90% charge of the rechargeable cell.

(Previously Presented) 20. A hybrid power supply comprises:

a switching type DC/DC boost type converter that receives energy from a primary battery cell, with the primary battery cell being an alkaline cell, Zn-air cell, fuel cell, solar cell, or another current limited power source, and delivers energy to a rechargeable cell, the rechargeable battery being a Li-Ion or Li-Polymer rechargeable cell, and with the switching type DC/DC converter set to provide a fixed output voltage that is less than the full charge voltage of the rechargeable cell; and

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an operational amplifier with a primary battery current sensing resistor to provide primary battery current control with the output of the amplifier coupled in a closed feedback loop of the DC/DC converter and the closed feedback loop of the converter further comprises a resistor coupled between output and feedback terminals of the converter.

(Previously Presented) 21. The hybrid power supply of claim 20, further comprising: a circuit including a primary battery current control that senses primary battery current, and controls in part operation of the converter to provide constant current discharge on the primary battery side of the hybrid power supply.

(Previously Presented) 22. The hybrid power supply of claim 20 wherein the circuit further comprises:

a primary current sense amplifier/comparator and a power shutdown circuit to shut down the primary current sense amplifier/comparator.

(Previously Presented) 23. The hybrid power supply of claim 20 wherein the circuit delivers an output voltage that corresponds to about 90% charge of the rechargeable cell.

(Previously Presented) 24. The hybrid power supply of claim 20 wherein the primary cell is an alkaline cell, Zn-air cell, or fuel cell.

(Previously Presented) 25. The hybrid power supply of claim 20 wherein the primary cell is a fuel cell.

(Previously Presented) 26. The hybrid power supply of claim 20 wherein the primary cell is an alkaline cell.